Infill Development for Greensboro, NC

A White Paper for the Comprehensive Plan Steering Committee

In the Spring of 2000, the City of Greensboro invited a team of planning experts to recommend the design of a comprehensive plan. The team recommended that a Steering Committee be established, and that early efforts of that committee lay the foundation for the plan, develop community vision, and identify the issues to be addressed in the plan. Further, the teams observed a number of issues were fundamental to the plan, including the need to evaluate and accommodate infill development. This white paper is intended to assist the Steering Committee in its evaluation of issues related to infill development.

Infill Development: Opportunities and Constraints

Like many American urban areas, the activity, economy and culture of Greensboro has shifted from an active central place and compact urbanized area to an increasingly decentralized, growing region. A considerable portion of that growth results from the nature of the development industry, a somewhat risk-adverse group of independent decision-makers, which responds to perceived consumer preferences. From the outside and in many neighborhoods and business districts, the City of Greensboro is a thriving community, but from some neighborhood perspectives, and from the perspective of fiscal analysis, the specter of sprawl looks like a threat to Greensboro's future.

Greensboro, like other urban areas, has suffered from sagging central area real estate markets, holes in the fabric of neighborhoods and premature vacancies in not-that-old retail areas. The city has witnessed disruption and relocation of jobs and services as the decentralization of development, particularly commercial and industrial development, moves manufacturing and other jobs further from the concentrations of lower income and lesser skilled residents. The capacity to meet the demands for schools, sewers, water supply, private utilities, recreation facilities and other supporting infrastructure is stretched to the limit to meet the demand of new development, while existing capacity in older portions of the community are not fully utilized.

The Specter of Sprawl

Decentralization, commonly referred to as sprawl, exaggerates the weaknesses of the infrastructure and service systems that support a community. Decentralization creates a greater dependence on the automobile. Lower densities of homes and business make it more difficult to financially or functionally serve areas by fixed rail or bus, and distances between residential uses and commercial uses, recreation, even schools become so significant that walking is impractical. As a direct result, traffic congestion increases on the limited number of roads that serve the decentralized area, air quality is

reduced, and there is a decline in the character of living and shopping environments.

Decentralization has placed additional stress on already limited resources, including exaggerating demand on water supply (more lawn to water, more cars to wash), and public safety expenditures (more roads to patrol per dollar of assessed property value.)

What is the alternative to sprawl?

The issue is not growth. The issues are the where, when and how of growth. Infill development is growth without the hazards of sprawl. By way of a definition:

> ***infill development is an economic use of vacant land within urban areas where water, sewer, and other public services are already in place***.

It may be the first urbanization of property that has, for one reason or another, been passed-by as development has extended out from its core. Or, it may be the redevelopment of property that was previously used for a less dense or less viable use. Infill development out-bids the existing under-use or non-use of the property.

What distinguishes infill from other development?

By definition, infill development occurs where the city is already providing public services and where the infrastructure of public water, sanitary sewer, storm sewer, roadways, fire stations, libraries, etc. are already in place, and most commonly, capacity already exists. In contrast, development which occurs at the periphery of the community often brings with it considerable public capital and operating expenses, including the extension of utilities, increased treatment capacity for water and effluent, increased storage capacity for water and storm water, greater road capacity. It also brings additional operating expenses for police, fire, public works, and other community services. These additional costs are aggravated by the time delay between the capital or operating expense and the repayment of those costs through the tax revenue stream.

It is possible to grow at the periphery of a community in a balanced and positive way. Peripheral growth, where well planned, served by a strong network of existing roads, transit, utilities and other infrastructure, may be an appropriate and attractive extension of the strong community. This form of peripheral development is compact, contiguous growth. Unfortunately, Greensboro lacks the well-established structure onto which substantial compact, contiguous growth can easily be accommodated.

Communities prepared to support compact, contiguous growth require each additional cost engendered by new development is be paid by that new development through a development impact fee or other assessment proportionate to that cost. However, Greensboro, like many communities, does not have such a system, and therefore, capital costs induced by new development on the community's fringe are paid for by the community as a whole. One advantage infill development has over even the best compact, contiguous growth is that no special impact fees or other assessments need be established since the new infrastructure is rarely necessary, and it often pays for services through taxes well in advance of demanding the service. As importantly, the inequity between infill and sprawl goes beyond this imperfect assessment of costs. As development occurs at the periphery, the cost to provide services to an increasingly lower density and geometrically larger area, becomes increasingly more expensive as measured on a per capita, per household, or per acre basis.

1. ***Low density, peripheral, suburban development generates less tax revenue per acre, and distorts the balance between the costs of providing public services and the revenues received from those properties demanding public services.***

Low density, peripheral, suburban development is led by homebuilders seeking to serve the market for more spacious, lower density residential environments. Rarely do retailers forge new frontiers in advance of the market. Occasionally, employers (office or manufacturing) will seek to establish an outlining facility, particularly as an expression of a perceived prestige associated with large campus settings. Although new homebuyers and major employers may be constructing sizable facilities on vast areas of land, it is rare that the overall investment per acre (translated into property tax revenues per acre) match the investment per acre commonly found in the more compact, urbanized traditional neighborhoods and business parks. As a result, the exaggerated capital and operating costs of serving new homes and business campuses on larger sites (caused by longer distances for utilities and service runs for any given number of homes or businesses) are not offset by the tax revenues of more substantial facilities at lower densities. It is not difficult to understand the substantial advantage (from a municipal perspective) that infill has over low density, peripheral, suburban growth regarding tax revenues. Infill development increases the investment and tax revenues over existing vacant or underdeveloped property, in an area where services and capacities already exist so that little additional public costs are created by the development.

2. **Sprawl and decentralization replaces productive farmland**.

The speculative cycle of land prices affects the economics of continued farming well beyond the urban fringe. Beyond the direct assimilation of existing

agriculture, the morphology of extensive growth conflicts with the function and viability of agriculture near extensive growth areas. Development has immediate effects on the ever increasingly difficult ability to maintain agricultural land in production. Conversion of rural roads for commercial and residential use interrupts efficient agricultural commerce, the movement of ag. vehicles, and separates farm fields. The value paid by speculators and developers wildly outpaces the value supportable by agriculture. Farms become undesirable "nuisances" among residential dwellings. Lowered farm density erodes the base of support for agricultural support services, making services more expensive and requiring greater travel. The distances to market increase, reducing the competitive advantage for local farmers in favor of regional and national conglomerates. Ultimately, extensive growth converts far more useable farmland to non-agriculture purpose than is directly demanded by growth itself. Infill development, in contrast, does not absorb additional productive land, and in fact, increases the market for locally produced agriculture products.

3. *Low density, peripheral, suburban development often creates inefficient use of infrastructure.*

Neighborhood schools are a good example why infill development can make better use of expensive infrastructure. There are several forces at work here:

1). Schools, like other capital improvements, are lumpy (though it may be possible to build a new, smaller school, it is difficult to construct a proportionately smaller gym, or hire a proportionately less expensive administrator/principal for a smaller demand, and even harder to downsize an existing school.)

2.) When development creates greater demand for classrooms, we expand schools.

3.) When distances between homes and schools increase (exaggerated by bigger lot sizes and lower densities) we build new schools further from the center of the community.

4.) When household populations decline, we cannot shrink schools. With other infrastructure, we usually do not abandon old capacity, we simply make less use of it, but, when school capacity needs to be reduced, the newer, peripheral schools survive and existing older neighborhood schools close.

As a result of the cyclical nature of school enrollment, shifts in school population within the community, and the lumpiness of the investment, school districts have tended to crowd classrooms in existing schools until the demand forces the construction of new schools, and to transport students to distant schools. As the

balance of growth tends toward the peripheral, we make less use and less efficient use of our sunk public investments.

4. **Transportation and land-use are inextricably linked in both function and character: how we design and use our transportation directly affects how we can design and use our land, conversely, how we design and use our land directly affects the use and character of the transportation.**

Low-density peripheral suburban development is driven by a perceived market for easy-to-develop properties at or near the arterial roads that link outlying areas to the central city. Since outlying areas do not have the nearby services or amenities enjoyed by strong neighborhoods, residential users connect to the community core through arterial roadways. Commercial users see high volumes of traffic along these arterials and want to capture the market. This can generate a pattern of commercial corridors extending away from the core, with non-commercial uses separating the corridors, (increasingly less dense as the distance from the road increases and as the distance from the core increases.) In its least dense form, this looks like the axle and spokes of a wheel, and in its more complete form, it resembles the branches of a tree or snowflake.

The branches (arterials) are required to provide capacity to connect the non-residential uses to the core of the community, and to provide direct accessibility to the commercial uses along the corridor. Capacity and accessibility are two mutually incompatible functions that lead directly to public complaints of congestion and traffic. The cry for more capacity results in increasing the road width, thus directly reducing the character of the roadway. A corollary to the reliance on arterials is the fact that low density, peripheral, suburban development cannot support the mass transit alternatives that could relieve the traffic stress that the reliance generates.

5. **Infill development supports existing business, and in particular existing neighborhood businesses.**

Retail site locators often use a surrogate for the spend-able income of a potential client base; they look for rooftops, and in particular, a minimum total number of residential rooftops within their theoretical capture zone or comfortable driving distance/time. When retail facilities go chasing rooftops they typically apply a template that accounts for some of the same rooftops and spend-able income used to justify previous retail (strip) locations. As a result there is an inherent flaw in the analysis that drives the overbuilding of retail facilities, in turn, depriving older retailers of existing market share. The phenomenon accounts for some portion of the aging inner ring of retail strips that do not compete well with newer, outlying retailing. Infill development adds to the spend-able income within the capture zone of existing businesses.

One Nation, Under Sprawl...

Greensboro is not alone in its experience of with low density, peripheral, suburban development. Throughout the nation, the physical area accommodating suburban and outlying development out-paces household formations as people buy bigger, newer, or otherwise more fashionable housing. The American Dream has merged with the frontier mentality, driving the demand for ranchettes, country estates, and the mock security of being physically separated and isolated from neighbors. Industry seeks larger, more modern, or more prestigious sites, in part as a result of a perception of crime associated with traditional, aging industrial locations and facilities, or as a means of modifying their existing employment base, but also, in pursuit of the same image of the American Dream business campus or research park.

The literature is replete of critiques of the lifestyle, fiscal and physical products of this phenomenon. The design professions have sought refuge in the attempts to stylize counter-phenomenon environments, engendering a considerable fascination with neo-traditional development. Planners and policy advocates seek a broader change, toward the establishment of smart growth, sensible growth or sustainable development. Generally, these approaches advocate:

- Efficient use of land resources
- Full use of urban services
- A compatible mix of uses
- Support for transit & transportation options
- Human-scaled design
- Equity in the public investment and public services

By its nature, infill development has a greater potential for meeting these objectives than any peripheral sites.

Why are Infill Opportunities Neglected?

If infill development is so obviously to the City's and community's advantage, why is there so little of it occurring? **Perhaps the most compelling reason is that the nature of development economics favors a short term investment strategy for developers: maximize profitability over the shortest investment period;** and, simultaneously, home buyers, industry and retailers measure the value of their purchase in terms of dollars per square foot. As a result, the developer seeks the easiest sites to develop, (i.e. purchase, rezone, subdivide, grade, install utilities and roads, and sell lots) with maximum appeal (i.e. the largest lots in reasonable proximity to a road into town) with the fewest threats (i.e. similar property or zoning all around generating little resistance to the development process). The market, either future home buyers or commercial / industrial users, seeks the greatest total square feet of land and building that their money can buy, and avoid proximity to neighbors who's lifestyle or image conflicts with their own. As

a result, both developer and end user are motivated to seek peripheral sites over infill sites.

Along with the motivation toward peripheral sites, there is also a considerable number of reasons which inhibit the choice of infill sites. (From a strategic perspective, it may be far more effective to eliminate the inhibitions to the development of infill sites than it would be to inhibit the preference of developers and end-users for peripheral sites)

- **Infill sites may be perceived as being served by inferior quality public services.** With the limited exception of Historic and Traditional, few of the terms for aging and maturity in the English language are currently perceived as positive (check for synonyms for "older" to see what I mean). Older areas are commonly perceived as decaying, having lower quality roadways, dated schools, antiquated libraries and parks, lower water pressure, and weaker capacities to fight fires and crime.

- **Inadequate capacities or antiquated character of existing infrastructure may not serve new development.** Infill sites may have just been passed-by in a recent round of hop, skip and jump to the next growth area. If so, than the infrastructure may be quite modern and well sized. However, many infill sites were previously used for other purposes, and the utilities were sized to accommodate the development of a different age. Sanitary sewer, storm sewer and water main sizing as recent as the 1960's may no longer meet the standards used by the City and developers. Even if the utilities are present, they may need to be ripped out and replaced with higher capacity, commonly at the developer's expense. It may be cheaper and easier to extend utilities to peripheral sites than to rip out and replace a short length of existing utilities. Other utilities such as power supply and telecommunications serving business infill sites may be equally inadequate

- **Infill development sites are harder to assemble than peripheral green fields.** There are any number of conditions that inhibit the assembly of infill property, either by a private developer or by economic development organizations in advance of private redevelopment. Among them is the **existence of tax delinquencies** that need to be paid by the assembler and state limitations on the timing of foreclosure for tax delinquencies. Redevelopment sites **with fragmented ownership,** currently or in the past, may have been sold or conveyed multiple times in abnormal circumstances, may be subject to liens and covenants, may have been combined or split with recorded or unrecorded records, or may for a great variety of reasons be **subject to title problems**. Time is money, and attorney time is more money. Developers have a well-deserved aversion to spending money assembling property.

- **The development community is often not aware of infill development opportunities.** Part of the process of developing infill sites involves the marketing of potential sites to developers. In addition to the perceptions of developers that favor peripheral sites, the addition of **ineffective marketing of infill sites** compounds the issue. Marketing may be the responsibility of the property owner, manager, real estate agent, or other party, few of, which have the specialized knowledge and resources to overcome the inhibitions to infill sites or to find potential developers. Even where cities or economic development agencies choose to aggressively encourage infill development, there is most often a limited central clearinghouse for information on potential sites. Multiple listing services only cover those properties that are being handled by agents...whose tolerance for long periods of inaction and disinterest in the special characteristics of infill sites is notoriously limited. Unassembled sites, which may offer the greatest potential for infill, are rarely listed.

- **The development community is often not aware of the strength of the market for infill.** A series of recent studies by the real estate market analysts reporting in publications by the American Planning Association, the Urban Land Institute, the Lincoln Institute of Land Policy, and others have indicated that the market for traditional neighborhood development, both of mixed use and purely residential, have both strong markets and have been profitable to developers.

- **Infill sites may be priced higher than they are worth.** Property owners who are under-utilizing or have no current use for a property commonly maintain an **inflated expectation regarding the value**, and therefore the pricing of their property. Few owners take into account the real costs of development that are required to allow infill sites to compete with peripheral sites including removal of existing improvements, nor do they consider the reduction in value due to the peculiarities of parcel shape or size or physical limitations to building due to topography, subsoil conditions or the need for environmental redemption. Most often, the longer the owner holds the property, the more distortion the owner places on the expectation of investment/value appreciation, and the greater the price.

- **Zoning and comprehensive plan designations often inhibit infill development.** Communities may have imposed zoning and development standards that, though potentially appropriate at the time the zoning was established, may not match market realities. Either on the basis of the permitted uses, or the densities allowed, developers will confront a city and a community which has built up its mental investment in the zoning, making it ever more difficult to change. The cost and process of controlling property for an extended and indeterminate period during which the developer seeks rezoning is often one of the most significant impediments to conversion of potential infill property

to development. The most consistent concern stated by developers is the growing ability of neighborhoods and commissions to stymie the most reasonable development through the public hearing process imposing a NIMBY or BANANA veto.

- **Development review, and particularly the process of rezoning inhibits infill development.** The second most consistent complaint from developers is that of the municipality's imposition of onerous regulatory procedures and bureaucratic delays. The perception by developers is that although communities may impose similar standards (and there is even a question of equity here) on both infill and peripheral developments, that the municipality's familiarity with new development with large, simple development sites allows the process of peripheral development to proceed with much less time, effort, inconsistency, and unpredictability than on infill sites.

- **Public facilities planning favors the easy peripheral development (paid for by peripheral developers).** In discussion with City of Greensboro Infrastructure Team leadership, there was recognition that even in the best of circumstances, the coordination in facility planning and service provision within infill areas requires exceptional effort. No existing standardized procedure exists to assure that the planning for the future redevelopment of infill areas coincides with the planning or capital investment in public facilities planning.

- **Other conditions may exist which give peripheral developments an advantage over infill development**. Among these are existing taxing and other factors which encourage speculation; the propensity for corporations to hold land (and in excess of needs) in reserve as a hedge against future change; a developer and consumer willingness to assume the costs of new facilities in outlying locations because they are new, and a disinterest in assuming costs to upgrade existing older facilities; and, a history of municipal policies which encourage and subsidize growth.

- **Just because it is infill doesn't make it good development.** Location within the existing urbanized area may pose many advantages for an infill development, but it does not necessarily make it compatible or desirable within its context. Badly designed, overly dense, or incompatible function or land use may be exaggerated by proximity. Good planning and site design practices are necessary, whether a development is infill or peripheral.

Infill Issues for the Steering Committee's Review:

A Comprehensive Plan establishes goals and policies and recommends strategies that guide the growth of a community over an extended period of

time. When drafting the Comprehensive Plan, the Steering Committee will set goals policies and recommend those strategies that encourage appropriate infill development in Greensboro. Below are examples of strategies that other cities have used to encourage infill development:

1. **Changing existing policies and practices that give preference to low density, peripheral suburban development over infill development. The Comprehensive Plan** can steer City growth away from sprawling development by setting the stage for modified zoning and regulatory standards to further infill development and inhibit low density, suburban development. For example, land use designations should be located and sized to match reasonable market expectation for new development in the foreseeable future. Implementation strategies, including annexation, rezoning, and long-term capital improvements plans should not be biased toward peripheral development, reflecting the "infill first" policy. At the same time, changes to current capital facilities and operating investments can enhance the marketability of infill development. By limiting support for peripheral growth and by improving the marketability of infill areas, growth can be encouraged where it is best accommodated.

2. **Identifying future infill opportunities and the means for their implementation. The** comprehensive planning process should highlight new infill opportunities and the infrastructure and transportation improvements that will best support compact growth. Once identified, some cities have provided incentives for developments that complement mass transit systems, by promoting a mix of land uses, and by offering more varied transit routes to and from work, home, and shopping areas. Many cities have created more explicit land use regulations that provide zoning incentives for infill development not available to peripheral growth.

3. **Adapting the plan to work with existing neighborhoods, and utilizing neighborhoods as the basis for implementing the policies of the plan.** Working at the neighborhood level in the comprehensive planning process will provide insight into neighborhood needs, such as services and employment. Involving neighborhood residents engenders community vision, neighborhood awareness, and an understanding of infill development. An additional benefit of this strategy is the avoidance of the NIMBY/BANANA response to infill development seen by potential infill developers as the primary inhibitor of infill development.

4. **Prescribing a balanced, fiscally stable and sustainable land use pattern.** Current and future policies should be crafted with an eye toward the long-term fiscal stability of the City of the Greensboro. The proposed mix and arrangement of land-uses should represent the market's natural parity

between residences, employees, jobs, students, demand for goods and services, and public uses and functions. The Comprehensive Plan should identify opportunities to support transit-oriented development utilizing public investment, land use regulation and rational transit routing. In inevitably, the City will find that infill development is most compatible with the continued private reinvestment in neighborhoods and the community that assures fiscal stability.

Conclusions

Market forces, industry biases, planning and regulatory conditions have combined to support a trend toward low density, peripheral, suburban development and away from infill development. This trend will not reverse itself. The Comprehensive Plan must lead the community away from the trend, and set goals and policies and recommend strategies for growing the regional economy, efficient land-use, efficient mobility, housing choice and affordability, safe neighborhoods, community life, and environmental stewardship. These must steer away from policies that foster a dispersed and auto-dependent development pattern that harms the economy and detracts from the quality of life in the City. In essence, the City must choose to advance an "infill first" policy and pursue and aggressive strategy of supporting new and appropriate infill development, or find itself trying to correct the imbalances and inequities which are characteristic of sprawl and unmanaged peripheral development.